

Public Water System Check-up & Self-Assessment Form

New Hampshire Department of Environmental Services Water Supply Engineering Bureau Public Water Supply Capacity Development

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INTRODUCTION

In 1974, the U.S. Congress enacted the Safe Drinking Water Act (SDWA) to ensure that all public water systems provide safe and reliable drinking water to their customers. To fulfill this obligation, a water system needs to possess and maintain adequate technical, managerial and financial capabilities. Public water supply rules and regulations provide only a framework to achieve this goal. It is committed and knowledgeable people that make water system operations successful. All owners, operators, managers and water system personnel therefore need to understand what constitutes adequate technical, managerial and financial capabilities and their respective roles in managing and operating a well-run drinking water supply system.

In addition, the SDWA requires that a public water supply system applying for a State Revolving Fund loan must demonstrate that it has adequate financial, managerial and technical capacity.

Water System Capacity Development

From the regulatory standpoint, well-run water systems are considered to have adequate "capacity." The terms "capacity development" and "capacity assurance" are unique to the drinking water industry and are not related to volume or competence, but rather toward ability and sustainability. "Capacity development" can be thought of as a process through which a system voluntarily plans for and implements activities to ensure that a water system can meet both its immediate and long term obligations to provide safe and reliable drinking water to its customers. Capacity activities have been categorized into the following three groups:

- Technical capacity refers to the physical infrastructure of the water system, including but not limited to the adequacy of the source water, infrastructure (source, treatment, storage, and distribution), and the ability of system personnel to implement the requisite technical knowledge.
- Managerial capacity refers to the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages to customers and regulatory agencies.
- Financial capacity refers to the financial resources of the water system, including, but not limited to, revenue sufficiency, credit worthiness, and fiscal controls.

This water system check-up & self-assessment guide presents a structured series of yes/no questions that pertain to the technical, managerial and financial aspects of a water system. These questions are intended to help owners/operators identify and prepare for operating costs and major capital improvement costs brought about by future demand for drinking water and new regulations. Nine of these questions are written in bold font and are assigned a point value with the answer. If the point total from the answers of these nine questions equals 25 or more, the water system must prepare a business plan as described in Env-Ws 363 Capacity Assurance for Existing Public Water Systems. A business plan will help these deficient systems develop the "capacity" to better run their system.

This assessment is also an excellent tool to prepare both a business plan and a long-range plan. For more information on small water system management and operation, please visit New Hampshire's Capacity Development web page at www.des.state.nh.us/sweb/capacity/

The Water Supply Engineering Bureau (WSEB) encourages water system overseers (commissioners, selectmen, owners, etc.) and system operators (superintendents, managers, system staff) to review and

complete this self-assessment form **together**. Annual follow up self-assessments will measure operations improvements made on the basis of initial assessments.

Assistance will be available to those who may need help in completing this form. Please contact Richard Thayer (603) 271-2950, rthayer@des.state.nh.us at DES' Water Supply Engineering Bureau for assistance if needed.

	General Information						
USEPA ID #	Date:						
Water System Name:							
Street Address:							
Town / City:	State:	Zip Co	ode:				
Responsible Person in Charge (Owner, Ma	nager or Designee) and T	Title:					
Mailing Address:							
E-mail Address:							
Telephone:							
Person(s) preparing this form:							
Public W	ater Supply System Info	ormation					
Ownership Category:							
(e.g., Village Di	strict, Municipal, Privatel	y-owned, o	ther)				
Number of Service Connections:	Population Served:_						
System Treatment Classification: (e.g., I, II, III or	System Distributio	n Classific	ation:				
(e.g., I, II, III or	IV)		(e.g., I, II, III or IV)				
Please answer each of the following questions for your system by checking the appropriate response. If the question does not apply to your system, please answer N/A.							
Source Water							
<i>_</i>	ce water Ground		Purchased water				
Do you have an alternate source or a back	ip source?	es	\square No				

	WATER PROTECTION AND EMERGENCY PREPAREDNESS				
	General Source Water Protection	Yes	No	N/A	Unknown
1	Do you have a written source water protection program?				
2	If yes, is the source protection program being actively implemented?				
3	If your system purchases water, does the supplier have a written protection				
	program?		_		
4	Do you have a source water protection outreach program?		Ш	Ш	
5	Have you reviewed your Drinking Water Source Assessment Report from DES? (If you have not received it, please call DES at 271-0657)				
6	Have steps been taken to address criteria identified in the Drinking Water Source Assessment Report as "High" risk?				
7	Have the planning board or land use officials in each town in which your source				
0	protection area(s) are located been informed in writing that these areas exist?				
8	Are you familiar with DES's grant programs for source water protection?				
9	Do you patrol your source protection area(s) at least annually?	Ш			
1.0	Do you evaluate and/or survey potential contamination source (PCS) businesses				
10	identified in the source water assessment at least once every three years?			Ш	
	(required for new sources approved after 1991 and recommended for all others)				
	Answer only the following sections that apply				
	Source Water ProtectionSurface Water				
11	Have you reviewed the watershed delineation included in your Drinking Water Source Assessment Report?				
12	Do you control the shoreline of your source through ownership or easements on the land?				
13	Is the remainder of the watershed protected through public ownership or	П	П		
	restrictive zoning?	Ш		Ш	
14	Are current state rules tailored specifically to protect your surface water source?				
15	Are water use restrictions (e.g., boating, swimming) in place for the entire water body?				
16	Are water use restrictions (e.g., boating, swimming) in place for the area around				
17	your intake?		_		
17	Do you have signs at the public access points to notify users of restrictions?	Ш		Ш	
	Source Water ProtectionGround Water				
18	Have you reviewed the wellhead protection area delineation included in your Drinking Water Source Assessment Report?				
19	Do you own or control land use activities on all the land in the sanitary				
	protective radius of each well?				
20	Do you own the land or control land use activities in the wellhead protection				
	area outside the sanitary protective radius?				
	Emergency Preparedness				
22	Do you have a written emergency response plan to address threats to your water supply (industrial accidents/spills, vandalism, terrorist actions, etc.)?				
23	Do you have a plan to increase water system security? (locks, fencing, alarms,				
	motion detectors, etc)				
24	Do you have a written Emergency Response Plan for system operations?				

	See Ws-Env-360.14				
	TECHNICAL CAPACITY				
	Water Quantity				
25	Do you have a sufficient quantity of source water to meet demand for the next 5 years?				
26	Do you measure and record your daily water use, including maximum daily demand?				
		Yes	No	N/A	Unknown
27	Can you meet anticipated maximum demand conditions (peak usage and/or emergency usage)?				
28	Have you been able to meet usage demand during drought conditions?				
29	Do you conduct water audits to determine the volume of unaccounted-for water?				
30	Do you have routine leak detection and repair program?				
31	Is unaccounted-for water less than 15 percent of the total water delivered to the water mains?				
32	Do you have a water conservation plan or procedures?				
33	Are the operating pressures in the water system between 35 psi and 85 psi at the service connections of each customer?				
34	Can you maintain adequate pressure (20 psi or more) in the distribution system under all flow conditions?				
35	In the last three months, has there been more than three unscheduled service interruptions and / or one or more unscheduled service interruptions exceeding twelve hours? Yes=5 points				
36	If your system has more than 30 service connections, do you have an approved second source? (groundwater systems only)				
	Water Quality				
37	Does your finish water contain contaminants above their MCLs? Yes=20 points				
38	Is the water treatment equipment, needed to achieve compliance with MCLs, operated and maintained in good working order? No=20 points				
39	Has the system had any monitoring or reporting violations in the last twelve months? Yes=5 points				
40	Is your system in compliance with remaining SDWA requirements?				
41	If no to above, do you know what deficiencies you have?				
42	Do you have backflow prevention and cross connection control programs?				
	Treatment: Corrosion Control				
43	Have the "first draw" water quality results for lead and copper been below 15 ug/l for lead and 1.3 mg/l for copper?				
44	Does your finish water have a pH greater than 8 and an alkalinity greater than 50 mg/l?				
	Treatment: Radionuclides				
46	Do you know if your radon levels are in the high (> 4000pCi/l), medium (300 to 4000 pCi/l), or low (< 300 pCi/l) range?				
47	Are levels of radium (226 and 228 combined) in your finish water below 20 pCi/l?				
48	Are levels of Gross Alpha (including radium 226, excluding radon and uranium)				

	below 15 pCi/l?				
	Treatment: Inorganic Contaminants				
49	Is the concentration of arsenic in your finish water below 0.01 mg/l? The current MCL for arsenic will change from 0.05 mg/l to 0.01mg/l in 2006				
50	Is the concentration of fluoride in your finish water below 4 mg/l?	П	П	П	П
51	Is the concentration of nitrate in your finish water below 10 mg/l?				П
	Plant and Distribution Operations and Procedures				
52	Does the water system have repair agreements with all three				
	of the following contractors: electrical, mechanical and distribution system? No = 5 points				
53	Does the operator flush the water system at least annually?				
54	Do you have maps or plans that clearly define your service area?				
55	Do you have current and accurate plans and diagrams of the distribution system (As-built plans)?				
		Yes	No	N/A	Unknown
56	Are all valves exercised and lubricated annually?				
57	Are all sources of supply and all customers metered?				
58	Are all meters accurate, operational, and the proper size?				
59	Do you have accurate and up-dated plant design plans and specifications?				
60	Do you have a written comprehensive Operations and Maintenance manual for all system operations?				
61	Do you have and use technical service manuals?				
62	Is your operating machinery regularly inspected?				
63	Do you have and use a preventive maintenance schedule for facilities equipment?				
64	Do you have an adequate spare parts inventory to meet emergencies?				
65	Are your test instruments regularly inspected and calibrated?				
66	Can your standby/emergency power system supply sufficient power to operate your system during peak demand?				
67	If yes, has it been tested/evaluated within the last six months?				
	Staff Certification and Training				
68	Are the system operator(s) currently licensed for the required license classification(s)?				
69	Does the system have a back-up certified operator? No=5 points				
70	Do system personnel attend appropriate and required training?				
71	Are all other key staff positions filled including office personnel, managerial personnel and water system over seers (trustees, selectmen, directors, etc.)?				
	Water Quality Assurance				
72	Has your system had a sanitary survey within the last five years?				
73	Were any significant facility or operational deficiencies noted in the last sanitary survey? (ref. Env-Ws 306.01(d) (1 & 2) Yes=5 points				
74	Has the most recent sanitary survey indicated any deficiencies?				
75	If yes, have the indicated deficiencies been corrected?				
76	Has your system had a violation of SDWA rules or State water quality rules within the last two years?				
	MANAGERIAL CAPACITY				

	Organizational Structure				
77	Does the system have a clearly identified ownership/management structure with clearly defined roles for owners and operators?				
78	Does the system have a clearly identified official to interact with public and regulatory entities?				
79	Is there an organizational chart to detail system structure?				
80	Are all applicable by-laws, ordinances, charter provisions, covenants or other constitutional documents and governing agreements current?				
81	Are constitutional and governing agreements regularly reviewed and amended?	П			
82	Does the governing body hold duly and regularly scheduled meetings with				
82	proper public posting and appropriate time for public notification?				
83	Are minutes of the meetings taken and made readily available to the public?		П		
84	Do you have written personnel policies?		П		
85	Are the personnel policies regularly reviewed and amended as needed?		П		
86	Do you have a safety program?		П		
87	Is the safety program regularly reviewed, practiced and amended as needed?	П	П	П	
				N/A	Unknown
00	De you have written noticies and massadyres for responding to multiplicate spiniss	res	110	IN/A	Unknown
88	Do you have written policies and procedures for responding to public inquiries, concerns or complaints?				
89	Do you have written operational policies and procedures for such things as:				
0.0	connection/disconnection, public notification for violations/alerts/emergencies?				
90	Are these policies and procedures regularly reviewed and amended as needed?				
91	Do you engage in general public education activities beyond the required issuance of Consumer Confidence Reports?				
	System Planning				
92	Does your system have a written Comprehensive System Facilities Plan (long range, 10 to 20 year plan for total system operations)?				
	Collaboration and Interconnection				
93	Are you interested in partnering with other drinking water systems, either locally or regionally, to share staff, water, equipment, or supplies and/or to purchase water, power, equipment, or supplies?				
94	Are you interested in entering into mutual aid agreements with other systems?				
95	Have you considered contracting your services, staff or equipment to other water systems as may be needed?				
96	Have you considered the possibility of merging with adjacent systems?				П
	Computer Information Systems				
97	Do you have and use a computer for information management?				
98	Is the computer used for process control?				
		Ш		Ш	
99	Is the computer used for financial management?				
100	Is the computer used for maintaining general information files?				
101	Do you have an e-mail account?				
102	Do you have Internet access?				
	FINANCIAL CAPACITY				
	Budgeting				

103	Do you prepare a written annual budget?				
104	Do your annual revenues exceed annual operating, maintenance &				
	administrative expenses by 10 to 20 percent?				
105	Are water system revenues applied only to water system expenses?				
106	Are you meeting your budget goals with respect to income and expenses?				
107	Does your budgeting process provide for depreciation of existing equipment?				
108	Does the water system fund a capital reserve account? No=5 points				
	Financial Controls				
109	Do you have written policies for billing and collection?				
110	Do you prepare monthly and/or quarterly financial statements?				
111	Do overseers (commissioners, selectmen, directors, etc.) regularly review financial statements?				
112	Does your system have an annual financial audit?				
113	Are delinquent accounts less than 5% of the annual operating budget?				
114	Are the water system's contractual obligations being met?				
115	Does the water system have any contractual debts over 6 months				П
	in arrears? Yes=5 points	Ш	Ш	Ш	
		Yes	No	N/A	Unknown
	Water Rates				
116	Do you review your rate structure and fees annually?				
	Does your rate structure generate sufficient income to:				
117	Pay for operating expenses?				
118	Fund depreciation or reserve accounts?				
119	Fund a capital reserve account to cover equipment replacement expenses?				
120	Does your water system generate sufficient income to meet estimated expenses				П
	during the current and forecasted budget years?				
121	To withstand cash flow fluctuations, does the system have an operating cash		П		
	reserve equal to or greater than 1/8 its annual operating budget?				
122	Can your system cover the cost of an emergency or failure of its most vulnerable				
100	system component? (well, supply source, pump, etc.)				
123	Are your water rates "affordable"? NHDES considers an annual water rate equal to or less than 1 percent of the community's median household income to				
	be affordable. (New Hampshire residential average for 2001: \$304/home/year)				
	Financial Planning				
124	Do you prepare a multi-year budget (three years or more)?	П	П	П	
125	Do you have a written long-range capital improvement plan (ten years or more)?		П		П
123	Do you have a written long-range capital improvement plan (ten years of more):				
Sve	etem name: EPAID #:				
If v	ou believe your system would benefit from training or assistance, please describe	vour	need	ls in t	he
	ce below:	Jour		III t	
Бри					
	Technical				
Hel	p wanted:				

Financial		
Help wanted:		
Managerial		
Managerial Help wanted:		

HAVE QUESTIONS? NEED HELP? HAVE SUGGESTIONS?

Please contact: Richard Thayer, Capacity Coordinator, (603) 271-2950 or e-mail: rthayer@des.state.nh.us or visit the New Hampshire's Capacity Development web page at www.des.state.nh.us/wseb/capacity/